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UNITED STATES UTILITY PATENT APPLICATION
FOR
ELECTRONIC BALLAST WITH
PROGRAMMABLE PROCESSOR

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(349354;)

Michael E. Sellers
Typed Name

Michael E. Sellers
Signature

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T.L.
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ELECTRONIC BALLAST WITH PROGRAMMABLE PROCESSOR

This application is a continuation-in-part (CIP) of U.S. application no. 10/145,420, filed
May 14, 2002 and entitled Electronic Ballast For Discharge Lamps.
which is now U.S. Patent No. 6,650,067

1. FIELD OF THE INVENTION

The present invention relates generally to ballast circuits for operating gaseous discharge
5 lamps. More particularly, the present invention relates to an electronic ballast with a
programmable processor.

2. BACKGROUND OF THE INVENTION

Ballast circuits are generally used in gaseous discharge lighting systems to regulate the
supply of electrical power to the lamp. The type and size of lamp to be operated are typically
10 determinative of how the ballast circuit will be configured. For example, high intensity
discharge (HID) lamps such as mercury, metal halide, and high pressure sodium lamps are
usually operated at high wattage and require a different ballast circuit than lamps such as
fluorescent lamps which operate at relatively low wattage. Even among lamps of the same type
(i.e., mercury, metal halide, high pressure sodium, fluorescent, etc.) the specific lamp wattage
15 can vary, which in turn requires a corresponding variance of elements within the ballast circuit in
order to optimize operation of the lamps. As a result, conventional ballast circuits are unable to
accommodate proper operation of different lamps types and/or lamps of the same type which
operate at different wattages.

Typical ballast circuits include a starting circuit for igniting the lamp and an operating
20 LCR (Inductor-Capacitor-Resistor) circuit for sustaining lamp ignition. In a typical ballast
circuit, the same inductor is used to produce the electrical excitation necessary to ignite as well
as to operate the lamp. In order to withstand large operating currents for prolonged periods of